

Translation

PATENT COOPERATION TREATY

PCT/DE2003/002891



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P15405WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/DE2003/002891	International filing date (day/month/year) 01 September 2003 (01.09.2003)	Priority date (day/month/year) 30 September 2002 (30.09.2002)
International Patent Classification (IPC) or national classification and IPC H01L 25/075		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 8 sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 27 April 2004 (27.04.2004)	Date of completion of this report 24 January 2005 (24.01.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ The international application as originally filed/furnished
- ☒ the description:
pages _____, as originally filed/furnished
pages* _____ 1-6 received by this Authority on 10 January 2005 (10.01.2005)
pages* _____ received by this Authority on _____
- ☒ the claims:
pages _____, as originally filed/furnished
pages* _____, as amended (together with any statement) under Article 19
pages* _____ 1-5 received by this Authority on 10 January 2005 (10.01.2005)
pages* _____ received by this Authority on _____
- ☒ the drawings:
pages _____ 1/3-3/3 _____, as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

...5...

1. This report has been drafted without taking into consideration (some of) the amendments, since in the opinion of the Authority said amendments go beyond the disclosure in the originally filed application (PCT Rule 70.2(c)), for the reasons indicated.

The amendments submitted with the letter of 6 January 2005 introduce substantive matter which, contrary to PCT Article 34(2)(b), goes beyond the disclosure in the international application as filed. The amendments are as follows:

1.1. Claim 1:

'a diffuser (10) being disposed between the image reproduction device (9) and the light emitting aperture (9, 18)'

The basis for this feature in the description is provided only in the embodiments in connection with figures 1, 4 and 5 and in the third paragraph on page 4, the arrangement, however, comprising a liquid crystal display (9).

The 'light emitting aperture' was originally indicated using (9, 18), the basis for reference sign (18) in the description being provided only in the embodiment in connection with figure 3 (third

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paragraph on page 4 to first paragraph on page 5) .
That embodiment does not, however, use a
'diffuser'. In addition, the use of reference sign
(9) for the 'light emitting aperture' results in a
lack of clarity and thus contravenes PCT Article 6
(i.e. since the diffuser is disposed 'between the
image reproduction device (9) and the light
emitting aperture (9)'). The wording of the
original claim 5 also indicates that 'the image
reproduction device (9) is disposed at the light
emitting aperture'.

1.2 Claim 5:

'that the image reproduction device (9) slopes so
that incident light is not reflected in the same
direction in which the light leaves the image
reproduction device (9) so as to arrive at the
viewer'

The basis for this feature in the description is
provided only in the embodiment in connection with
figures 1, 4 and 5 and in lines 23 to 27 on page 4,
the arrangement, however, comprising a liquid
crystal display (9) and the sloping of the liquid
crystal display (9) being effected by a frame (8),
which also creates a space between the reflector
(5) and the liquid crystal display (9).

2. The subject matter of claim 1 amended by the
addition of the term 'Head-Up Display' was not

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covered by the international search report.
Consequently, the expert opinion concerning the novelty, inventive step and industrial applicability in claim 1 was established only on the basis of the documents cited in the international search report and insofar as the subject matter of claim 1 relates to an 'Arrangement for producing a bundled light flux'.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	2-5	YES
	Claims	1	NO
Inventive step (IS)	Claims		YES
	Claims	1-5	NO
Industrial applicability (IA)	Claims	1-5	YES
	Claims		NO

2. Citations and explanations**1. Reference is made to the following documents:**

D1: US 5 043 716 A (LAI J ET AL) 27 August 1991

D2: US 4 935 665 A (MURATA H) 19 June 1990

D3: US 5 836 676 A (ANDO A ET AL) 17 November 1998

2.1 The application does not meet the requirements of PCT Article 33(2) because the subject matter of independent claim 1 lacks novelty.

D1 (column 2, line 41 to column 3, line 47 and figures 2 to 7) discloses an arrangement consisting of a light-emitting diode matrix (11) and a latticed reflector (12) which forms a light channel (14) for each matrix point, the end of each light channel nearest to the light-emitting diode matrix containing a convex lens (23), and an image reproduction device (13, 25) containing a light valve being disposed at the light emitting aperture.

The subject matter of claim 1 thus lacks novelty.

2.2 Claims 2 to 5, which are directly or indirectly dependent on claim 1, do not appear to contain any

additional features that meet the requirements of PCT Article 33(3) in respect of inventive step. The reasons are as follows:

2.2.1 Claim 2:

An embodiment in which the convex lenses of all the light channels are integrally connected to a plate is an obvious possible configuration to a person skilled in the art - see D2 (second paragraph in column 5).

Consequently, the subject matter of this claim does not involve an inventive step.

2.2.2 Claim 4:

An arrangement using astigmatic lenses is an obvious possible configuration to a person skilled in the art - see D3 (column 4 to column 5, line 61).

Consequently, the subject matter of this claim does not involve an inventive step.

2.2.3 Claims 3, 5:

The features of these claims are merely some of the many obvious possibilities from which a person skilled in the art would choose according to the circumstances in order to solve the problem of interest, without thereby being inventive.

Consequently, the subject matter of these claims does not involve an inventive step.

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3. The present application meets the requirements of PCT Article 33(4) because the subject matter of claims 1 to 5 is industrially applicable.